

This Listing of Claims will replace all prior versions, and listings, of claims in the Application:

Listing of Claims:

1. (Currently amended) A method of image compression and decompression comprising:
providing a span of interest for an acquired image sequence wherein the span of interest defines a time sequence and a space sequence in the acquired image sequence that includes analytically relevant information in the acquired image sequence; ~~and excludes other information in the acquired image sequence:~~
selecting ~~a portion of~~ at least one frame in the acquired image sequence in the span of interest; ~~thereby selecting the analytically relevant information and sacrificing the other information.~~
applying lossless compression to the ~~portion of the acquired image sequence~~ at least one frame and obtaining therefrom ~~[[a]]~~ at least one compressed image sequence;
applying decompression to the at least one compressed image sequence and obtaining therefrom ~~[[an]]~~ at least one analytically relevant image; ~~sequence:~~ and
displaying the at least one analytically relevant image sequence, thereby displaying the analytically relevant information ~~without displaying the other information.~~
2. (Currently amended) The method of claim 1, wherein the ~~portion of the acquired image sequence is~~ at least one frame comprises a plurality of frames in the ~~span of interest time sequence.~~
3. (Currently amended) The method of claim 1, wherein the ~~portion of the acquired image sequence is~~ at least one frame in the span of interest comprises a plurality of frames in space sequence.
4. (Currently amended) The method of claim 1 further comprising archiving the at least one analytically relevant image sequence.
5. (Currently amended) The method of claim 1, wherein selecting the ~~portion of~~ at least one frame in the acquired image sequence comprises using a user select option.
6. (Original) The method of claim 5, wherein the user select option comprises segmenting an identifiable anatomy of a patient.

7. (Currently amended) The method of claim 5, wherein the user select option comprises manually marking frames at least one frame of interest.

8. (Original) The method of claim 5, wherein the user select option comprises sketch-gripping an image boundary.

9-11. (Canceled)

12. (Currently amended) A method of image compression and decompression for images obtained by an imaging device, comprising:

providing a span of interest for an acquired image sequence received from the imaging device wherein the span of interest defines a time sequence and a space sequence in the acquired image sequence that includes analytically relevant information in the acquired image sequence and excludes other information in the acquired image sequence;

~~selecting a portion of~~ at least one frame in the acquired image sequence in the span of interest, ~~thereby selecting the analytically relevant information and sacrificing the other information;~~

applying lossless compression to the ~~portion of the acquired image sequence~~ at least one image and obtaining therefrom ~~[[a]]~~ at least one compressed image sequence;

applying decompression to the at least one compressed image sequence and obtaining therefrom at least one analytically relevant image sequence; and

displaying the at least one analytically relevant image sequence, thereby displaying the analytically relevant information ~~without displaying the other information.~~

13. (Currently amended) The method of claim 12, wherein the imaging device is comprises a medical imaging device selected from the group consisting of: a magnetic resonance imaging system, a computed tomography system, an x ray system, an x ray angiogram system and an ultrasound system.

14. (Previously presented) A method of image compression and decompression for images obtained by an x ray device, comprising:

providing a span of interest for the images obtained by the x ray device, wherein the span of interest defines a time sequence and a space sequence that includes analytically relevant information in the images and excludes other information in the images, wherein the space sequence is defined by a collimator ring;

selecting at least one frame of interest in the span of interest, thereby selecting the analytically relevant information and sacrificing the other information;

applying lossless compression to the at least one frame of interest and obtaining therefrom a compressed image sequence;

applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence; and

displaying the analytically relevant image sequence, thereby displaying the analytically relevant information without displaying the other information.

15. (Currently amended) A method of image compression and decompression for images obtained by an x ray angiogram device, comprising:

providing a span of interest for the images obtained by the x ray angiogram device, wherein the span of interest defines a plurality of frames in a time sequence between two time instances that includes analytically relevant information in the images and ~~excludes other information in the images~~;

~~selecting a plurality of frames of interest in the span of interest, thereby selecting the analytically relevant information and sacrificing the other information;~~

applying lossless compression to the plurality of frames of interest and obtaining therefrom a compressed image sequence;

applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence; and

displaying the analytically relevant image sequence, ~~thereby displaying the analytically relevant information without displaying the other information.~~

16. (Previously presented) The method of claim 15, wherein the two time instances comprise a first time instance when a dye appears and second time instance when the dye disappears.

17. (Currently amended) A method of image compression and decompression for images obtained by an MRI device, comprising:

providing a span of interest for the images obtained by the MRI device, wherein the span of interest defines a plurality of frames in a time sequence between two time instances that includes analytically relevant information in the images and ~~excludes other information in the images~~;

~~selecting a plurality of frames of interest in the span of interest, thereby selecting the analytically relevant information and sacrificing the other information;~~

applying lossless compression to the plurality of frames of interest and obtaining therefrom a compressed image sequence;

applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence; and

displaying the analytically relevant image sequence, ~~thereby displaying the analytically relevant information without displaying the other information.~~

18. (Currently amended) The method of claim 17, wherein ~~selecting~~ the plurality of frames of interest comprises ~~using a user select option for manually selecting the a~~ plurality of frames of interest in a space sequence.

19. (Currently amended) The method of claim 17, ~~wherein selecting the plurality of frames of interest comprises~~ further comprising using automatic edge detection techniques for selecting the plurality of frames of interest in a space sequence.

20. (Currently amended) A method of ~~image~~ image compression and decompression for images obtained by an ultrasound device, comprising:

providing a span of interest for the images obtained by the ultrasound device, wherein the span of interest defines at least one frame in a time sequence and a space sequence that includes analytically relevant information in the images and ~~excludes other information in the images;~~

~~selecting at least one frame of interest in the span of interest, thereby selecting the analytically relevant information and sacrificing the other information;~~

applying lossless compression to the least one frame of interest and obtaining therefrom a compressed image sequence;

applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence; and

displaying the analytically relevant image sequence, ~~thereby displaying the analytically relevant information without displaying the other information.~~

21. (Currently amended) The method of claim 20, wherein ~~selecting~~ the at least one frame of interest comprises ~~selecting~~ a fan shaped image selected using automatic means.

22. (Currently amended) The method of claim 20, wherein ~~selecting~~ the at least one frame of interest comprises ~~selecting~~ a fan shaped image selected using manual means.

23. (Currently amended) A method of image compression and decompression comprising;

providing a span of Interest interest for an acquired image sequence, wherein the span of Interest interest defines a plurality of frames in a time sequence and a space sequence in the acquired image sequence that includes analytically relevant information in the acquired image sequence and excludes other information in the acquired image sequence;

~~selecting a portion of the acquired image sequence in the span of interest, thereby selecting the analytically relevant information and sacrificing the other information;~~

applying lossless compression to a first portion of the plurality of frames and obtaining therefrom a first compressed image sequence;

applying lossy compression to the a second portion of the acquired image sequence plurality of frames and obtaining therefrom a second compressed image sequence;

applying decompression to the first and second compressed image sequence sequences and obtaining therefrom an analytically relevant image sequence; and

displaying the analytically relevant image sequence, ~~thereby displaying the analytically relevant information without displaying the other information.~~

24. (Currently amended) An imaging system comprising:

a span of interest definer block for selecting ~~a portion of an image sequence in a span of interest for the image sequence, wherein the span of interest defines a time sequence and a space sequence in the~~ a plurality of frames from an image sequence that ~~includes analytically relevant information in the image sequence and excludes other information in the image sequence, thereby selecting the analytically relevant information and sacrificing the other information;~~

an image compression block for compressing the ~~portion of the image sequence~~ plurality of frames;

an image decompression block for decompressing and reconstructing the compressed image sequence plurality of frames; and

a display for displaying the reconstructed image sequence, ~~thereby displaying the analytically relevant information without displaying the other information.~~

25. (Currently amended) The imaging system of claim 24, wherein the ~~portion of the image sequence is at least one frame in the span of interest~~ plurality of frames comprises frames in a time sequence.

26. (Currently amended) The imaging system of claim 24, wherein the ~~portion of the image sequence is a plurality of frames in the span of interest~~ comprises frames in a space sequence.

27-30. (Canceled)

31. (Currently amended) A computer program encoded on a machine readable medium comprising an algorithm for:

~~selecting a portion of at least one frame an acquired image sequence in a span of interest for the an acquired image sequence, wherein the span of interest defines a time sequence and a space sequence in the acquired image sequence that includes analytically relevant information in the acquired image sequence and excludes other information in the acquired image sequence, and selecting the portion of the acquired image sequence selects the analytically relevant information and sacrifices the other information;~~

~~applying lossless compression to the portion of the acquired image sequence at least one frame and obtaining therefrom a compressed image sequence;~~

~~applying decompression to the compressed image sequence and obtaining therefrom~~
~~[[an]] at least one analytically relevant image; sequence; and~~

~~displaying the analytically relevant image sequence, thereby displaying the analytically relevant information without displaying the other information.~~

32. (Previously presented) A method of image compression and decompression in an x ray angiogram device, wherein the span of interest defines a time sequence and a space sequence in the acquired image sequence, that includes analytically relevant information in the acquired image sequence and excludes other information in the acquired image sequence, wherein the space sequence is defined by a collimator ring, and wherein the time sequence is based on a dye that is injected and tracked within a subject and increases visibility of blood vessels against surrounding tissues in the acquired image sequence;

~~selecting a portion of the acquired image sequence in the span of interest, thereby selecting the analytically relevant information and sacrificing the other information;~~

~~applying lossless compression to the portion of the acquired image sequence and obtaining therefrom a compressed image sequence;~~

~~applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence; and~~

~~displaying the analytically relevant image sequence, thereby displaying the analytically relevant information without displaying the other information.~~

33. (Previously presented) The method of claim 32, wherein the time sequence begins when the dye appears in the acquired image sequence and the time sequence ends when the dye disappears in the acquired image sequence.

34. (Canceled)

35. (Previously presented) The method of claim 32, wherein the space sequence is defined by a binary mask.

36. (Previously presented) The method of claim 32, wherein the portion of the acquired image sequence is confined within a time and space corresponding to a predefined portion of the acquired image sequence.

37. (Previously presented) The method of claim 32, wherein the portion of the acquired image sequence is provided by frames of interest, the acquired image sequence is provided by total frames, and a ratio of the frames of Interest to the total frames is in the range of 46.83 to 76.47 percent.

38. (Previously presented) The method of claim 32, wherein a compression ratio for the portion of the acquired image sequence has an improvement over a compression ratio for the acquired image sequence in the range of 13.15 to 16.96 percent